

Measuring Success

Abstracts 6, 7, 10, 15, 16, 36, 38, 47, 49, 61, 75, 76, 78

Computerized Immunization Programme in Murcia (Spain)

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Key Words: Newborns. Metabolic screening. Immunization Cards. Object-oriented programming

Background: 1991 our Region (1.200.000 inhabitants) has had a computerized programme for infant immunizations. Each of the 12.500 newborns/year receives on hospital discharge an envelope containing cards for urine and blood tests, which are sent to the laboratory to check for congenital metabolism disorders. The newborn's personal data are registered automatically in our program. Two weeks after birth the parents receive a letter of welcome from our chief medical officer, together with brochures explaining the function and efficacy of the vaccines included in the schedule (these are free for everyone) and a card for each of the five vaccination intervals (2, 4, 6, 15 and 18 months). The children are vaccinated at one of 200 vaccination centers (90% public and 10% private), where the cards are filled in (age at vaccination, type of vaccine [DTP, HB, Hib, OPV, DTaP, MMR], batch and centre code) and sent to our computer by ordinary post (some vaccination centres by modem).

Objective: To explain to programme managers our computerized system and how to improve coverage.

Methods: Review procedures for collecting information, contact undervaccinated children and assess monthly, quarterly and annual coverages.

Results: Our coverage for the 7-months doses increased from 83.61% in 1993 to 96% in 1998. In 1999, we incorporated the 6-year vaccine (MMR, OPV, DTaP) for those born in 1993.

Conclusion: The collaboration of maternity hospitals, laboratory, vaccination centres, computer team and regional government has made it possible in our setting to develop a vaccination register for promptly detecting a decrease in Regional, municipal and neighbourhood vaccine coverages and identify faulty batches.

Learning Objectives: To show a method for implementing a computerized vaccination programme in a middle-class area with public and private sectors.

Evaluating Health Promotion Materials in an Immunization Registry

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Key Words: Program evaluation, Health education, Reminder and Recall, Immunization registries

Background: CHILD Profile is a Washington State-based immunization registry and health promotion system. Both the immunization tracking and health promotion components of the registry are necessary tools for CHILD Profile to provide parents and providers with the information they need to make the right decisions about children. The health promotion component, driven by birth certificate data entered into and maintained in the registry, consists of well-child checkup and immunization reminders, and other health, safety and parenting information. These materials are mailed to all new parents at children's age-specific times.

Objective: To evaluate parent satisfaction with the health promotion materials to determine usefulness, usability and readability; to address questions about whether materials serve as reminders about immunization and other health and safety information.

Methods: Disseminate surveys to parents of children at different ages and in different geographic areas to examine satisfaction over time and across the state. A total of 5,400 surveys were sent statewide to explore differences in parent needs and satisfaction. A second survey and monetary incentive were provided for non-respondents to increase response rates.

Results: Preliminary results indicate significant parental satisfaction with materials. Additionally, initial results suggest that respondents consider the materials effective reminders for parents. Results will be available in January 2000.

Conclusion: Providing health promotion materials may prove successful at assisting parents with raising healthy children and getting their immunizations timely and age-appropriately.

Learning Objectives: Describe methods of evaluating parental/consumer satisfaction with health promotion materials aimed at parents of young children. Understand how mailed materials may serve the function of immunization reminders for parents. Share data on registries' multiple functions to improve immunization rates.

All Kids Count Performance Indicators: Measuring Registry Progress

KC Edwards, CDC, All Kids Count

Key Words: Performance Indicators. Monitoring Activities

Background: The All Kids Count (AKC) National Program Office (NPO), funded by the Robert Wood Johnson Foundation, supports and monitors 16 immunization registry projects nationwide. A key element of the NPO's monitoring activities is the administration of a biannual Performance Indicator Survey.

Objective: To present a summary of the AKC Performance Indicator Survey results and lessons learned from this monitoring methodology.

Methods: Individual registry project progress is measured in a quantitative manner using seven indicators as the yardstick for database maturity, timeliness of registry data capture, and provider participation levels.

Results: Survey results indicate that once an immunization registry attains a certain maturity level, rapid advancement toward fully operational status is possible. Results also indicate that a number of internal and external influences can have a dramatic impact on quantitative measures.

Conclusions: Several quantitative measures used by the NPO are considered good measures of registry maturity and progress while others are more suitable as internal project management tools. Many of the AKC II registry projects have adopted the indicators to gauge their own progress, identify problem areas, and better focus program resources.

Learning Objective: Understand the level of maturity attained by the 16 AKC projects as measured by quantitative indicators. Identify quantitative indicators for use as internal project management tools. Understand how select quantitative indicators can provide information on the maturity of an immunization registry and progress attained over time.

Utilizing Focus Groups to Reassess Provider Recruitment and Retention Strategies

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Key Words: Provider. Recruitment. Retention. Focus Group

Background: Enrollment in Kids Net with immunization data reached 50% of the target population by the end of 1998. In 1999 further enrollment of new providers and continued submission of quality data from already enrolled providers met many challenges which limited further enrollment and compromised data quality.

Objective: To reevaluate strategies for provider recruitment and retention utilizing focus groups as part of the strategic planning process.

Methods: Two focus groups, one with office staff utilizing Kids Net and one with physicians whose office were enrolled in Kids Net, were held to identify ways to improve and expand provider participation. Kids Net staff with the help of a marketing consultant held a retreat to plan new strategies to improve provider recruitment and retention.

Results: Outcomes of the retreat included a commitment to convert Kids Net to a Windows environment and to web enable it. A decision was made to minimize data transfer from billing systems and to establish a simplified bar coding system which would be the primary method of data input. Staff also committed to developing an expanded customer service model that relied on increased provider support and participation through relationship building.

Conclusions: Increased provider enrollment, provider retention, and system utilization will be dependent on:

- 1) technical and design improvements to the Kids Net system that enhance its ease of use
- 2) design enhancements that improve data collection and quality while minimizing office labor
- 3) implementing a customer service program that increases the perceived value of Kids Net

Learning Objectives: Describe methods for identifying problems related to provider recruitment and retention. Describe types of interventions that might be used to increase provider participation.

"Yes, We Want Access to Our Immunization Records" — Families

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Key Words: Consumers. Families. Internet. Providers. Legal Medical Record

Background: HealthRadius (formerly Health Information Institute), a partner with public health organizations in Washington State, provides access to the CHILD Profile statewide immunization registry. HealthRadius offers health care providers and family's access via the Internet to a legal medical record. The services increase the quality of immunization care and improve data management in provider office settings. IMM Care for Families is a subscription fee based program offered through the public-private partnership.

Objectives:

- Provide secure access for subscribing families to their immunization records
- Increase immunization rates
- Enhance the provider-patient relationship through electronic communication

Methods: A Web-browser program was developed giving access to the statewide registry that will allow families to view their demographics, immunization histories and recommended immunizations. Screens will be able to be printed for easy and convenient reports that can be used for school, childcare, camps, etc.

Results: Providers requested the service to reduce phone requests for reports

Family Survey:

- 100% liked the direct access convenience
- 100% wanted to receive reminders from their provider
- Many wanted additional features
- 100% were willing to pay (\$10-25 per family/year)
- Parents wanted to hear about the program from their provider

Conclusions: Market surveys indicated that a service providing families with direct access to their own immunization records was needed. Communication connections between the provider and the patient/family would be a desirable attribute of the service. Families are willing to pay for the convenience anticipated to improve the accountability for children immunized on schedule.

Learning Objectives: After attending this entire session, the individual will be able to:

- Identify key elements of a consumer product
- Describe the strategies for achieving participation by families, providers, public health and health plans for the success of a statewide immunization tracking system.

Target Audience: Program Managers, System Developers, Providers, Interested Others

Health Promotion Materials: Ensuring that Reminders/Recalls Give the Right Health Message to the Target Audience

Kristi Korolak, Laura Hutchinson; CHILD Profile

Key Words: Immunization Registry. Health Education Materials. Reminder/Recall

Background: CHILD Profile is Washington State's Health Promotion and Immunization Registry, designed to help ensure that children receive needed preventive health services. The Health Promotion component mails age-appropriate materials to parents of children, birth through age 6, a total of 17 different mailings timed about 30 days before each scheduled well-child visit. Materials are also translated into Spanish, and subsequently reviewed, pre-tested, and distributed to Spanish-reading families.

Objectives:

1. Provide parents current, dependable information on immunizations, health, safety and development geared toward the age of their child that is easy to read, and parent-friendly in order to support them in providing for the health care needs of their child.
2. Act as an immunization reminder system to parents so that children are better immunized, and better able to use preventive health services.

Methods: Materials are created by a health educator, graphic artist, and multi-disciplinary committee of health professionals. Materials are reviewed for content and accuracy by a panel of health professionals and parents. New materials are pre-tested with parents for both content and appropriateness of format using a variety of methods.

Results: Parents receive accurate and up-to-date health and immunization information that will assist them in caring for their child.

Conclusion: A development process that uses both professional expertise and user input in the creation and design process is the best way to help ensure a product that is both useful and high-quality.

Learning Objective: By the end of this session, participants will be able to:

- Describe process Washington state uses to create and revise materials
- List three methods used to pre-test materials to ensure materials meet target audience needs.

The Relationship Between Immunization Registry Operational Status and Accurate Vaccination Coverage Estimates Among Children Aged 19-35 Months

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Key Words: Assessment. Vaccination Coverage

Background: Registry functionality has been assessed using 12 core attributes and measured using the CDC/NIP 1999 Immunization Registry Annual Report.

Objective: To evaluate whether there is an association between the operational status of an immunization registry and agreement of immunization coverage estimates based on registry data and a "gold standard" (the National Immunization Survey).

Methods: The CDC/NIP 1999 Immunization Registry Annual Report collects self-reported registry development data from 64 projects. Based on the percentage of children aged 19-35 months enrolled in each registry and the percentage of 12 core registry functional attributes reported, the registries were categorized into low, medium, and high operational statuses. Using their registries, 26 projects assessed 4:3:1 vaccination estimates; these estimates were compared with corresponding estimates from the 1998 National Immunization Survey (NIS) within each of the three operational status categories.

Results: No association between median NIS 4:3:1 vaccination estimates and registry operational status was found. NIS 4:3:1 vaccination estimates in the high, medium, and low groups were 79.0%, 81.5%, and 82.5% respectively; corresponding registry estimates are 74.0% for the high group, 14.3% for the medium group, and 13.7% for the low group. The median absolute difference in registry and NIS estimates was 16.1% for registries in the high group, 67.5% for registries in the medium group, and 68.8% for registries in the low group.

Conclusions: There is little concordance between vaccination coverage estimates in the NIS and registry data; however, there is more concordance in registries with high operational status. Further efforts should concentrate on ensuring the highest quality of registry data. Continued monitoring of registry data is warranted; registries may not yet have sufficient functionality and enrollment to accurately assess population-based vaccination coverage.

Learning Objectives: Describe another means of assessing registry functionality through accuracy of vaccination coverage assessment.

Strategic Planning 101: The Importance of Basing Your Registry Development and Implementation Strategies on the Facts

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Key Words: Strategic Planning. Needs Assessment. Marketing Plan. Education Plan. Technical Plan. Private Providers. Stakeholders

Background: To ensure the software and registry program meets the needs of the stakeholders, a comprehensive needs assessment and strategic planning process is a very powerful tool. Tested and proven methods of data collection and strategic planning are being used to develop a five-year plan for a state-wide, internet-based, integrated immunization registry program in Maryland.

Methods: Presentation of effective methods of needs assessments and strategic planning conducted, and an outline and tasks were developed for Maryland. Experience from the Maryland project thus far will be presented as an example of how a project might begin a strategic planning process.

Conclusions: Strategic planning can help registry projects become proactive rather than reactive to the registry environment, and can map out long and short-term strategies and activities. Development of such a plan can prove very useful when seeking funding and legislation, and is worth the time and monetary investment.

Learning Objectives: Understand the components of the strategic planning process. Learn how to go about conducting a strategic plan with small and large budgets. Learn where to get additional resources about strategic planning. Learn the benefits of having a strategic plan.

Target Audience: Program Managers

abstracts

Registry Crystal Ball: Challenges for the Future

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Key Words: Funding. Resources. Sustainability. System integration

Background: AKC invited perspectives on the future of immunization registries from a variety of stakeholders to plan for future funding and direction of this initiative. As consultants working in diverse registry environments around the country we presented our views to AKC in October, 1999.

Objectives: Demonstrate the gaps between current registry deployment and the vision of Healthy People 2010 of 95% of children covered by a registry. Focus on successful strategies to reach this goal.

Methods: Using examples of registry development and consulting experience we drew conclusions and offered recommendations in several key areas: strategic direction, technology, organizational/political considerations, operations/administrative functions, and beneficial outputs to different audiences.

Results: Templates, strategies, and recommendations stakeholders can apply to their own projects to leverage our lessons learned.

Conclusions: The time for experimentation is over. Numerous factors outside of traditional registry issues need to be explored to develop viable strategies for the future.

Learning Objectives: Recognize different areas that need to be considered for a successful strategy; learn to appreciate the diversity of factors, traditional and non-traditional, that contribute to registry viability.

Reported Barriers and Challenges to Functional Immunization Registries

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Phyllis Harmon, Centers for Disease Control and Prevention, National Immunization Program;
Amy Pasani, Every Child By Two

Key Words: Immunization Registry. Funding. Provider Participation. Technical Challenges

Background: Community leaders can play a crucial role in helping parents and providers to understand the importance of tracking immunization status. Data were collected in preparation for Every Child By Two's effort to identify Governors' spouses who would serve as champions of registries within their jurisdictions. Challenges and barriers to registry development were identified, along with potential roles that spouses could play in facilitating solutions.

Objective: To identify the prominent challenges and barriers associated with immunization registry development.

Methods: Data were collected from 4/15/1999 to 8/12/1999 via an e-mail survey to 59 registry project managers soliciting information on specific registry progress and need. Follow-up telephone calls and e-mails were made to non-responders. Data collected from the 48 (81%) responders (41 states, 5 cities, Puerto Rico, and the U.S. Virgin Islands) were categorized according to challenges and barriers defined as affecting registry progress.

Results: 28 projects (58%) reported that registry costs and long-term funding were barriers to further registry development. 23 projects (46%) reported provider participation challenges, and 16 projects (33%) reported technical barriers. Only 7 projects (15%) reported privacy and confidentiality barriers, 6 (13%) reported time/staffing challenges, and 4 (8%) reported duplication or quality of records challenges.

Conclusions: To further registry development, more emphasis should be placed on identifying innovative solutions to acquiring additional funding for registries, enhancing participation from providers, and solving technical problems.

Learning Objective: Understanding key factors associated with low immunization registry development.

abstracts

Using Site Visits to Assess Immunization Registry Progress

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Key Words: Immunization Registries. Site Visits. Assessment. Immunization Registry Annual Report

Background: In January 1999, the National Vaccine Advisory Committee (NVAC) approved a report entitled "Development of Community- and State-Based Immunization Registries." In this report, NVAC recommended four objectives; two will be addressed in this presentation:

- 1) Ensure the participation of all immunization providers and recipients; and
- 2) Ensure appropriate functioning of registries.

In order to accomplish these objectives, NVAC recommended that CDC:

- 1) Monitor the level of provider and recipient participation;
- 2) monitor the implementation of registries; and
- 3) provide technical assistance.

Objective: To discuss a standardized site visit protocol that validates the Immunization Registry Annual Report.

Methods: Present the Site Visit Protocol and how it will be used. During the site visit, the Immunization Registry Annual Report will be discussed and the findings, including the Minimal Functional Standards, will be validated using an Assessment Measurement Tool. Various policy documents (e.g., registry implementation plans with objectives and time lines; provider implementation plans including marketing strategies; privacy and confidentiality policies, etc.) will be reviewed. Key implementation efforts will be discussed along with barriers and future needs.

Results: A working group including members of the Systems Development Branch; Immunization Services Division; All Kids Count Program; and PHPPO met to develop the Site Visit Protocol package. This package contains the following evaluation tools: (1) the Annual Report, (2) Minimal Functional Standards, (3) Assessment Tool, (4) Site Visit Guidelines, (5) Pre-Site Visit Reports Requested, and (6) a Site Visit Notification Proposal for States.

Conclusions: The working group developed a standardized Site Visit Protocol package that will be used for evaluation of immunization registries. Findings of these visits will be shared and possibly used for certification of immunization registries.

Learning Objectives: Participants will receive copies of the Site Visit Protocol package and learn about each tool and the evaluation measures used to gauge registry progress. These tools can be used at both the State and local levels. Also, feedback on the process will be solicited.

Immunization Registry Functional Standards as a Basis for Certification

Julie Gamez; CDC National Immunization Program (NIP)

Key Words: Certification. Standards. Technical Working Group. Immunization Registries

Background: In January 1999, NVAC approved a report entitled, "Development of Community and State-Based Immunization Registries." In this report, NVAC recommends that CDC and other stakeholders, including state/local health departments, representatives of managed care, NCVHS, informatics associations, etc., form a Technical Working Group (TWG) to:

- 1) review and provide comments on standards, benchmarks and protocols developed or identified by NIP for immunization registries;
- 2) assist in determining a method for accreditation or certification of immunization registries and provide ongoing quality assurance monitoring; and
- 3) suggest ways to facilitate the integration of registry functions into existing information systems.

In November 1999, the TWG was formed and held their first meeting. The group began by reviewing the Immunization Registry Minimum Functional Standards (formerly Minimum Registry Attributes). These 12 standards are considered the minimum functions necessary for an electronic tracking system to be considered an "immunization registry." As a part of their review, the TWG considered how these standards could serve as the criteria for evaluating immunization registries in a certification process, how the criteria should be applied, what evaluation tools should be used, and what organization or group should serve as the certifying body.

Objectives: To provide information about the process that is currently being developed to certify immunization registries, including proposed evaluation criteria (Minimum Functional Standards), measures and tools. To explain how a certification process will benefit immunization registries.

Methods: Discuss the developing certification process including the standards that may be used in the process, and how these standards may be evaluated and measured.

Results: The TWG reviewed and concurred with the Minimum Functional Standards and their definitions. These standards are used as criteria in the NIP Annual Registry Report and the proposed site visit protocol and may be incorporated into a process to certify immunization registries.

Conclusions: A certification process for immunization registries will be developed and implemented. The TWG is consulting with NIP on a process and the criteria for certification.

Learning Objective: Participants will learn about development of the certification process, and the proposed criteria, evaluation measures and tools that may be used in the certification process.

abstracts

Evaluation Tools to Monitor the Status of an Immunization Registry

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Key Words: Immunization Registries. Evaluation Tools

Background: CDC's NIP has developed a list of Minimum Functional Standards for an Immunization Registry. These standards are being considered to serve as the criteria for evaluating immunization registries in a certification process. In addition, All Kids Count (AKC) has developed a list of six criteria that are required for an immunization registry to reach fully operational status. Immunization Registries need to develop or adopt protocols and tools that can be used locally to monitor progress and implement timely changes that may move the registry toward certification or recognition as fully operational.

Objective: To present protocols and evaluation tools that may be used by an immunization registry to monitor their progress towards meeting the CDC Minimum Functional Standards and the six AKC criteria for a fully operational immunization registry.

Methods: The procedures and tools that NYC has developed to-date to acquire the functionality of each standard, the tools that are used to monitor the progress towards each standard, and the tools to measure data quality will be presented. Practical tips and suggestions for implementation of data query tools and data manipulation tools will also be presented.

Results: The staff of NY CIR developed a number of protocols and evaluation tools that are used to monitor the progress towards meeting the CDC standards and the six AKC criteria for immunization registries.

Conclusions: The evaluation tools used to monitor and evaluate the progress of New York's Citywide Immunization Registry may be useful to other registries in preparation for a CDC/AKC site visit or registry certification process.

Learning Objective: Participants will learn about the protocols and tools developed by an immunization registry to locally monitor and evaluate the progress towards meeting the CDC's standards and AKC's six criteria for immunization registries.

abstracts